

# Series RPV

## Residential Purge, Drain and Balance Valve

### Installation Instructions

When first filling the hydronics system or when refilling it after performing maintenance, you must remove all air from the piping and the radiation elements to fill them with water. Air trapped in the system can prevent proper circulation of water and cause noisy operation.

The Watts Residential Purge and Balance Valve (RPV) (Fig. 1) should be installed on the return piping of a hydronics heating circuit (see back) before it joins the return main. If the system comprises multiple zones, each zone should be fitted with the RPV.

### Purging the Hydronics System

1. Isolate all circuits by shutting the isolation or zone valves and the RPV's shutoff valves.
2. Starting with one circuit, attach a hose to the purge port of the RPV shown in (Fig. 2). (Note: a hose must be run into a suitable floor drain or run to the outside to accommodate purged water.)
3. Open the RPV's purge port by turning the brass screw  $\frac{1}{4}$  turn, and open the zone valve (Fig.3).
4. Then open the make up water or boiler fill valve's fast-fill feature. Allow water to flow through the RPV's purge port until the water runs clear and free of air bubbles.
5. Close the make up water or boiler fill valve.
6. Next, close the RPV purge port by turning the brass screw  $\frac{1}{4}$  turn until the water stops flowing, and shut off the isolation or zone valve.
7. Repeat steps 2 through 6 for each zone.
8. Upon completion of purging all zones of air, open the RPV shutoff valves (Fig. 4).

### Balancing the Hydronics System

When you have filled the entire system with water, you can open the balancing valve for each circuit and adjust it to provide optimum system comfort.

Fig. 1.

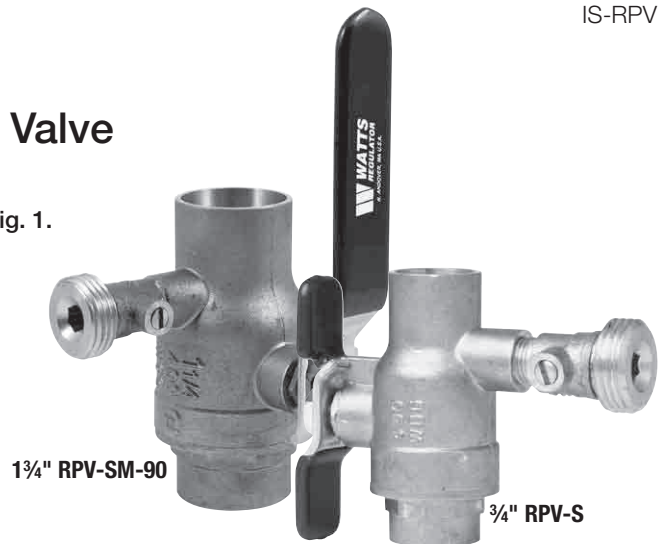


Fig. 2. Cutaway view of Watts RPV

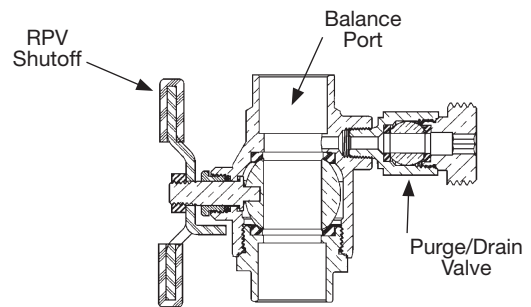


Fig. 3. Purge/drain valve open

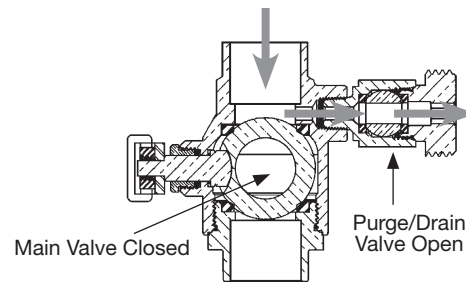
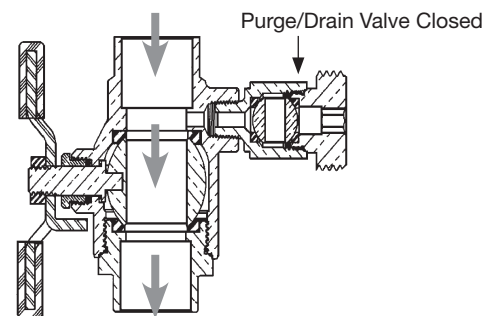
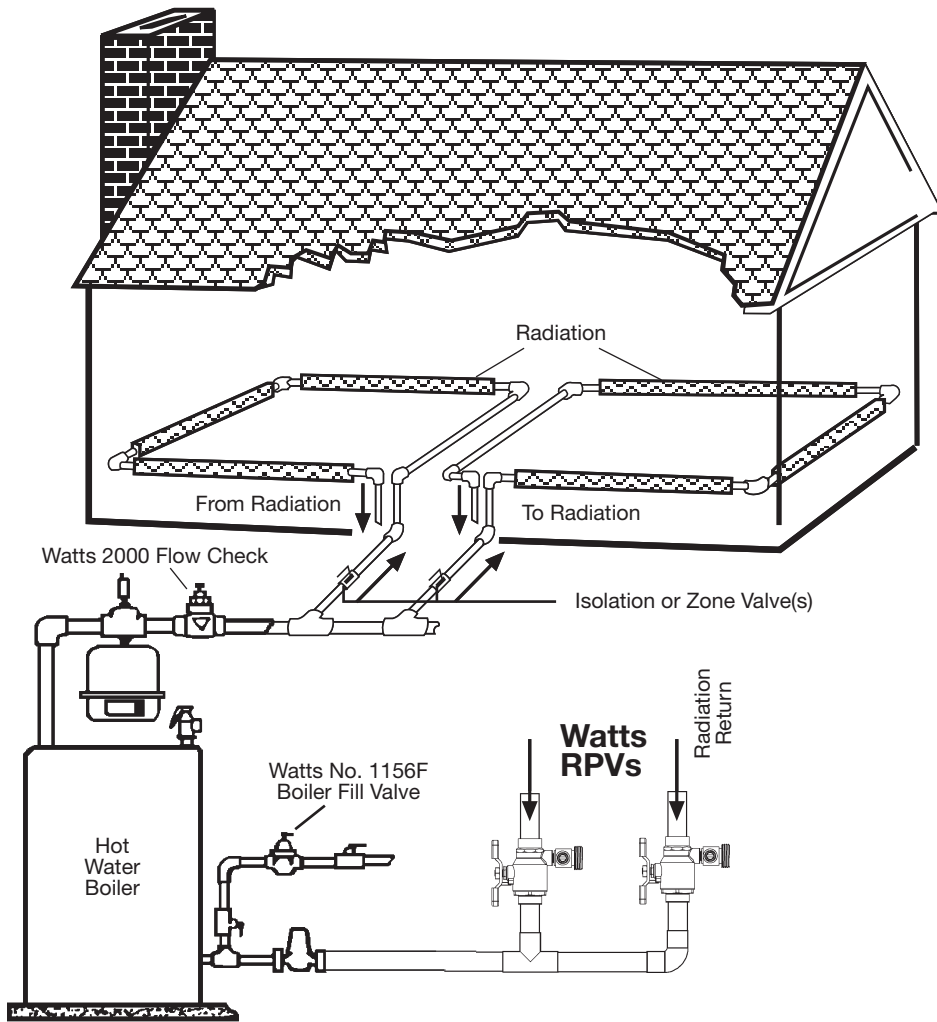


Fig. 4. Normal position



# Cutaway View Hydronic Heating Circuit



This valve is designed to be soft soldered into lines without disassembly, using a low temperature solder (420°F). Other solders such as 95/5 tin antimony (460°F) or 96/4 tin silver (430°F) can be used. However extreme caution must be used to prevent seal damage. Higher temperature solders will damage the seat material. ANSI B16.18 states that the maximum operating pressure of 50-50 solder connections is 200psi at 100°F and decreases with higher temperatures.

Apply heat with the flame directed AWAY from the center of the valve body. Excessive heat can harm the seats. After soldering, the packing nut may have to be tightened.

## CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: [www.watts.com/prop65](http://www.watts.com/prop65)

**Limited Warranty:** Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

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The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

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